What is claimed is:

1. A tilt angle measuring apparatus comprising:

a plurality of ultrasonic sensors each of which has a function of transmitting an ultrasonic wave to a road surface and a function of receiving the ultrasonic wave reflected by the road surface;

signal processing means that controls these ultrasonic sensors and computes a tilt angle of the road surface from signals detected by the ultrasonic sensors; and

a case that houses the ultrasonic sensors and the signal processing means in such a way that they do not move, wherein

the case includes a case body for housing the ultrasonic sensors and a cover for covering an upper portion of the case body, and

the case body is provided with a bottom plate having windows each of which exposes an ultrasonic wave transmitting/receiving face of each of the ultrasonic sensors, a side plate extending upward from a peripheral edge of the bottom plate and abutting against a bottom surface of the cover, and horn parts each of which extends downward from the bottom plate so as to surround each of the windows.

2. A tilt angle measuring apparatus comprising:

a plurality of ultrasonic sensors each of which has a function of transmitting an ultrasonic wave to a road surface and a function of receiving the ultrasonic wave reflected by the road surface;

signal processing means that controls these ultrasonic sensors and computes a tilt angle of the road surface from signals detected by the ultrasonic sensors; and

a case that houses the ultrasonic sensors and the signal

processing means in such a way that they do not move, wherein the case includes a case body arranged on a vehicle side, a holder that holds the ultrasonic sensors and is supported in the case body, and a cover that has horn parts directly below the ultrasonic sensors and covers a lower portion of the holder.

3. The tilt angle measuring apparatus as claimed in claim 2, wherein the holder includes a first bottom plate having windows each of which exposes an ultrasonic wave transmitting/receiving face of each of the ultrasonic sensors and a first side plate extending upward from a peripheral edge of the first bottom plate, and the cover includes a second bottom plate that has lower openings for passing the ultrasonic wave and is arranged apart from the first bottom plate, a second side plate extending upward from a peripheral edge of the second bottom plate, and the horn parts so as to extend from the lower openings to bottom surfaces of the ultrasonic sensors, respectively.

4. The tilt angle measuring apparatus as claimed in claim 2, wherein inner slanted faces of the horn parts are connected to lower opening faces by smooth curved faces, respectively.

5. The tilt angle measuring apparatus as claimed in claim 2, further comprising cylindrical parts that extend upward so as to surround the windows from the bottom plate and house the ultrasonic sensors from below, respectively.

6. The tilt angle measuring apparatus as claimed in claim 5, further comprising means for engaging the ultrasonic sensors with the cylindrical parts, respectively.

7. The tilt angle measuring apparatus as claimed in claim 2, wherein the cover has water draining holes.

8. The tilt angle measuring apparatus as claimed in claim 2, further comprising members that are arranged to surround the

horn parts and absorb or interrupt the ultrasonic wave.